

American Fruit Grower

DECEMBER • 1961

25 CENTS

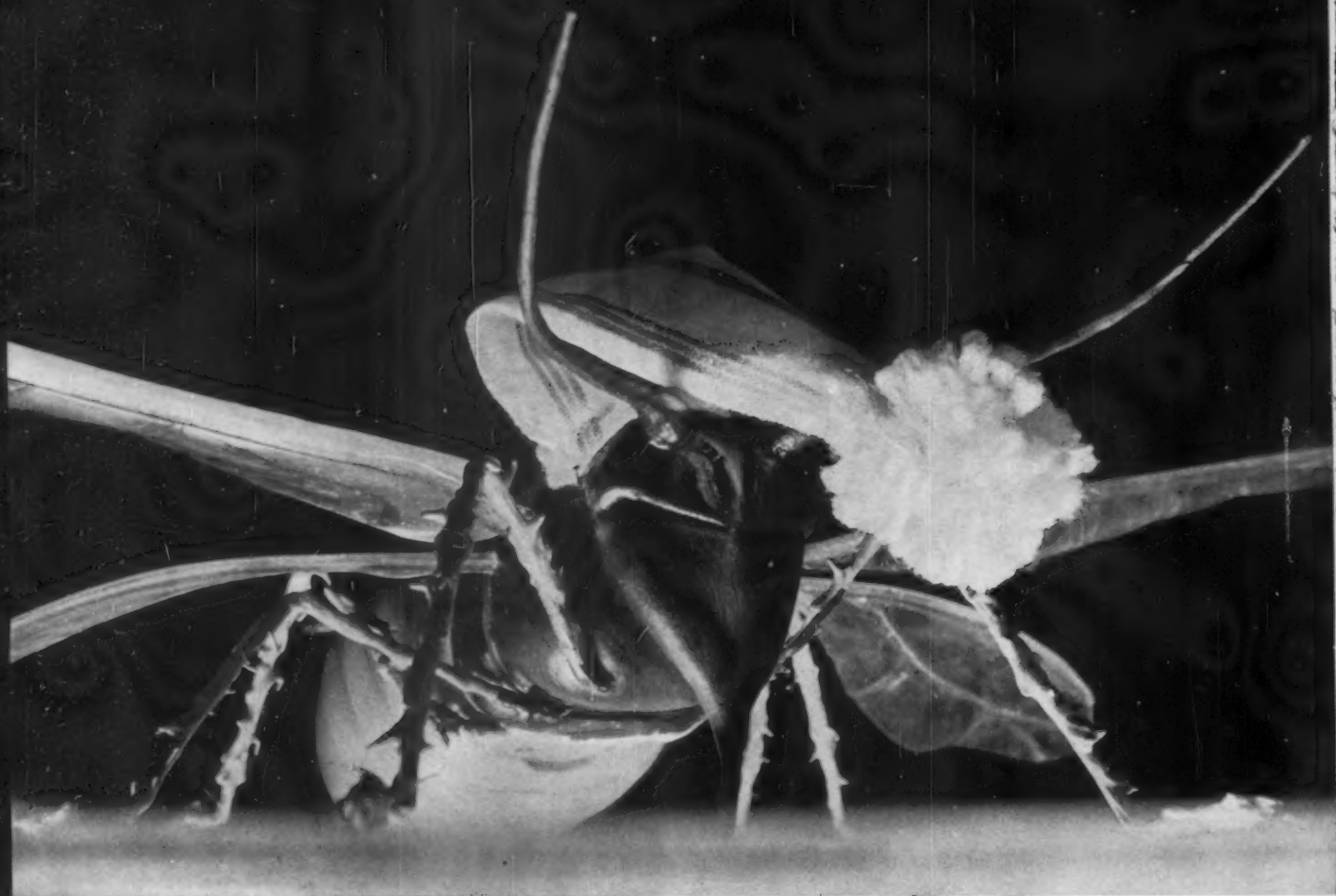
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the bugs are sleeping... now's your chance!

Spray with ethion-oil during the dormant or late dormant season for sure kill of overwintering mites, aphids and scales.

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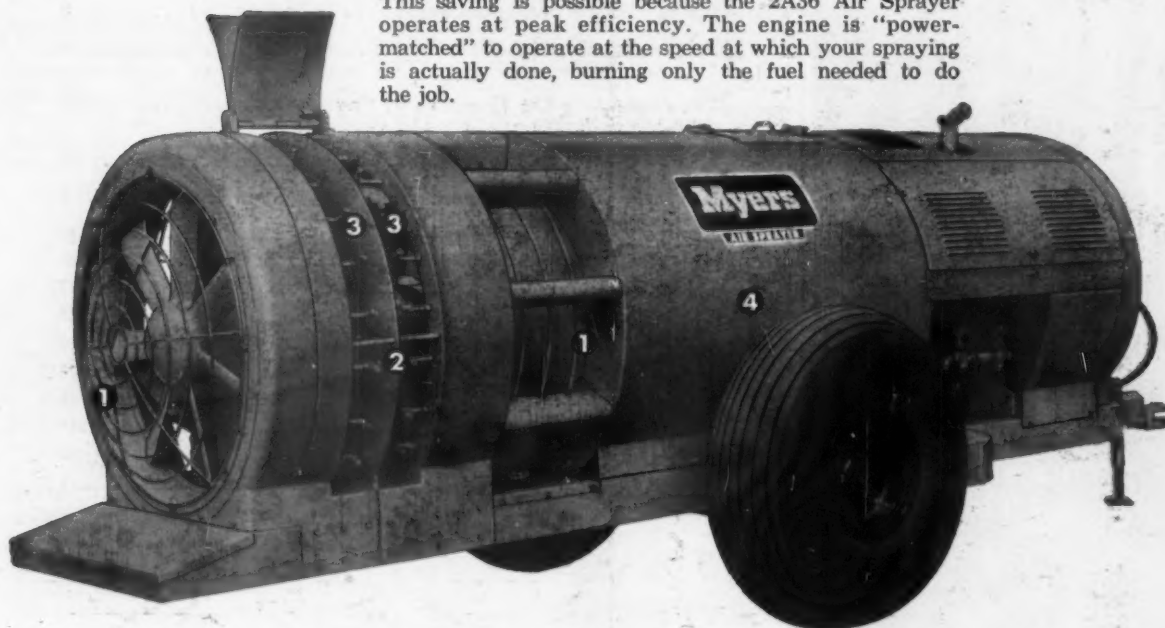
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CUT FUEL COST 40%*

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From Myers—the first name in Sprayers—comes an entirely new idea in air spraying. It's the all-new 2A36 Series Air Sprayer that does the job faster, with better coverage and deeper penetration . . . while cutting fuel costs 40% or more!

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You set the cutting tension—it stays that way

Exclusive on True Temper loppers: the dynamic hinge nut and bolt. It allows you to set the tension you want. No amount of use will alter it. The blade and hook can be disassembled in seconds for sharpening, then reassembled to exact tension. No other loppers offer both these advantages.

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TRUE TEMPER

THE RIGHT TOOL FOR THE RIGHT JOB



American Fruit Grower

Reg. U.S. Pat. Off.

Cover photo by John Corey shows Christmas gift apples being packed by D. T. Brown and granddaughters. Left to right with granddaddy are Necta, Keeta, Sheila, and Billie Jo Brown. Story on page 26.

Vol. 81

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NIAGARA'S RESEARCH FOR THE FUTURE

AT a gleaming, new research laboratory in Middleport, N. Y., Niagara Chemical Division of FMC Corporation made its entry into the space age with a full-scale commitment to research and development.

Some 25 editors were invited to the opening of the laboratory which was of special interest to AMERICAN FRUIT GROWER because the lab will be devoted completely to pesticide chemicals and herbicides. The new research unit is designed so that ultimately chemicals can be synthesized and tested in close proximity.

Dr. Robert L. Gates, director of the laboratory, expects that an average of 2000 compounds will be screened a year. In addition, there are facilities for the most advanced residue analyses as well as for testing and developing new formulations.

At the opening, Niagara Division Manager Stuart Bear announced a new chemical herbicide for tomatoes. Named Solan, it is applied after weeds come up and is effective on transplants as well as direct seeding.

Besides Solan, Niagara has developed two new insecticide-miticides, Ethion and Phostex, and a new herbicide for cotton, Dicryl. Niagara also markets two important insecticides, Tedion and Thiodan. Recently Niagara purchased certain assets of Standard Agricultural Chemicals, including Elgetol, a product well known to fruit growers, and various dinitro herbicides.

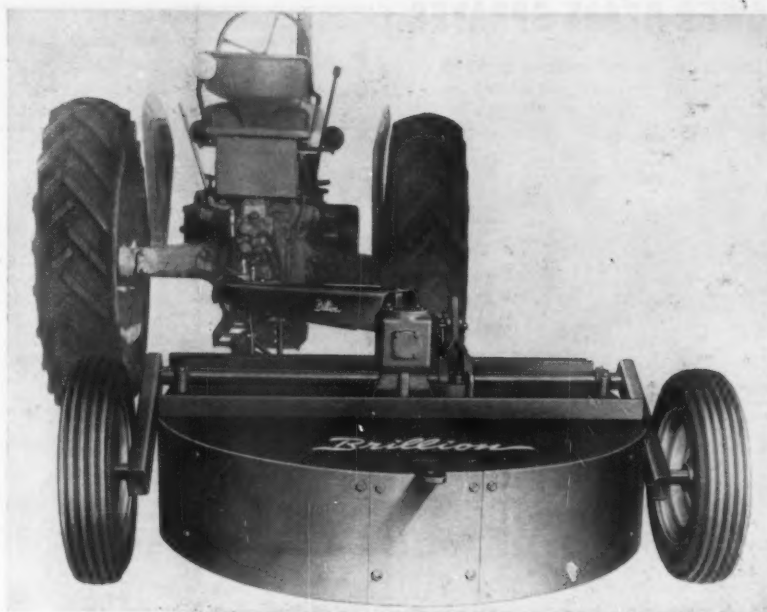
Niagara's full commitment to the systematic discovery of new pesticide chemicals signifies that this company is well aware that the status quo cannot exist for long in agriculture today. What pesticides are not outdated by insect resistance may soon lose popularity because of new crop technology, new areas of production, or new, more efficient competitive products.

One of the interesting developments at the laboratory is a carefully propagated strain of *non-resistant* mites. Many fruit growers would gladly exchange their resistant species for the more easily controlled Niagara strain! Niagara, of course, keeps this strain for initial testing of new miticides.—Richard T. Meister.

CHANGES HANDS

ORCHARD Equipment and Supply Co., Bristol, Conn., has acquired the manufacturing rights and inventory of Long-Airdox Sprayer Div., formerly known as Cardox Sprayer Div. Orchard Equipment has been a dealer for Cardox for many years.

DECEMBER, 1961



Brillion Offset Shredder has swinging drawbar for straight or offset shredding and clipping. Ideal for shredding prunings and for clipping grass and weeds under trees.

THE *Brillion* CUT-ALL 60 Top Hand in Your Orchard

SHREDS PRUNINGS. The Brillion Cut-All 60 is the perfect answer to disposal of prunings. You simply drive over them. Prunings, regardless of size, are reduced to chips and shreds which quickly disappear into the ground.

CUTS GRASS. The Cut-All does an excellent job of orchard mowing. Height is easily adjustable.

Where you need to trim in under low hanging branches, specify the offset model.

ORCHARD CLEAN-UP. Fence rows . . . weed patches . . . brush . . . along lanes . . . anywhere you need to remove plant growth either for appearance, convenience or orchard sanitation, the Brillion Cut-All is your top hand.

Why you get more VALUE in the BRILLION:

• **5-FOOT SWATH.** Shreds everything. Sucks up loose material or cuts off vegetation at height you adjust to.

• **FRICTION-SLIP-CLUTCH.** Positioned right at the blades to cushion jolts in heavy cutting. No shock transfer to tractor bearings through PTO. (See cutaway view below.)

• **FOUR HEAVY BLADES.** Blades total 70 pounds, measure 4 inches wide by 1/2 inch thick; are reversible.

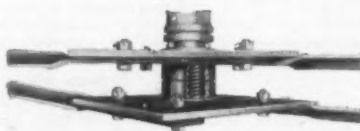
• **RUGGED SIDE HOUSING.** Shield is 3/16 inch steel with 1/2 inch thick reinforcing band. No heavier shield built.

• **OTHER IMPORTANT FEATURES.** Heaviest shredder gear box built . . . sure, dependable ratchet-type height adjustment . . . 3 universal joints instead of usual 2.



THE BRILLION 5' CUT-ALL
ROTARY SHREDDER

IF BRILLION MAKES IT, IT MUST BE GOOD!



Exclusive Brillion Friction-Slip-Clutch
at the blades . . . where the shock is.

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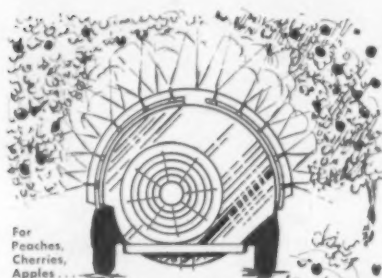
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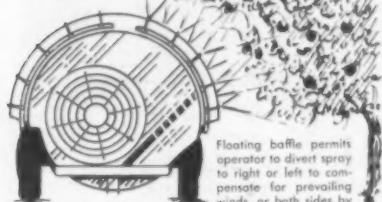
POWER-BLAST SPRAYER

Adaptable to any tractor with 30 to 50 H.P. The only power take off air blast sprayer with these advantages . . .

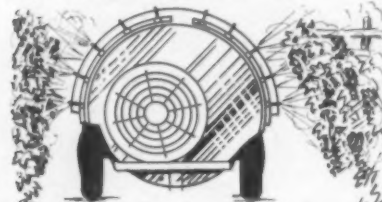


For Peaches, Cherries, Apples . . .

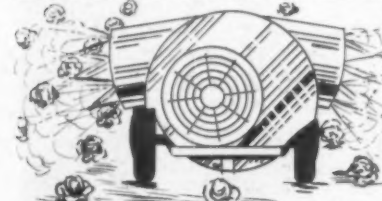
Complete spray with either dilute or concentrate.



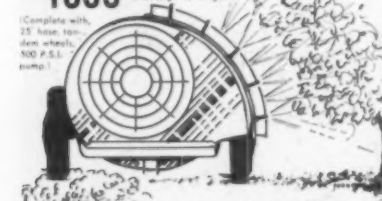
Floating baffle permits operator to divert spray to right or left to compensate for prevailing winds, or both sides by simple control mechanism. Throttle air control from a turbulent spray to a gentle breeze. Ideal for grapes, caneberries, etc.



Concentrated coverage with Rear's "Low-Row-Blow" attachment.



From **1695⁰⁰** O.B. Eugene, Oregon



All this plus hi-pressure hose and gun at no extra cost!



Write for name of dealer near you . . .

REAR'S MFG. CO.

755 River Avenue

Eugene, Oregon

LETTERS TO THE EDITOR

Our English Friends Agree

Dear Editor:

We found the article, *How to Train Dwarf Apple Trees* (Dec., 1960), by John C. Snyder of great interest and we thought that you might like to hear our experience of training and growing apple trees with a central leader.

After 15 years of using this method we have found that it pays handsome dividends. Yields are above the national average for



Cox's Orange Pippin, our main eating variety, by nearly 100%. These trees are still in their prime and we feel that still higher yields are to be obtained.

I've enclosed a photograph of myself inspecting a 15-year old Cox's Orange Pippin on EM II stock. Here at Fernhurst we allow the trees to grow to 10 feet, although it is considered unorthodox by both American and English standards.

Surrey, England

J. A. Berendt

They Specialize in Older Varieties

Dear Editor:

Several years ago, before I had learned how to graft, I was searching for a source of 10 older varieties which had been suggested to me as his favorites by Ira Glackens, then chairman of the Fruit Gardens Committee of American Pomological Society.

I couldn't find a nursery that listed them, although I sent for every catalog I could find. Then, I read an article in *AMERICAN FRUIT GROWER* about an Indiana nurseryman, Lorne Doud, who grew his own rootstocks and was one of the first in this country to sell commercially dwarf apple trees. Mr. Doud agreed to propagate the trees from Glackens' budwood, and two years later I planted the trees as oblique cordons.

Thus began my fruit testing here in Birmingham, my acquaintance with Mr. Doud (who is a commercial orchardist interested in quality fruits as well), and our finally joining forces in this enterprise, Southmeadow Fruit Gardens.

I thought you might be interested in having a copy of the enclosed catalog. It represents our experiment in providing a source for trees and scionwood of some of the choicer fruit varieties for the home garden.

Robert Nitschke

Southmeadow Fruit Gardens
Birmingham, Mich.

Those who take a keen interest in propagating choice and unusual fruit varieties

frequently have a difficult time obtaining trees or scionwood of old and rare varieties. For such connoisseurs, the *Southmeadow Fruit Gardens* catalog will prove a valuable reference. This unusual nursery offers trees of rare American and foreign apple, plum, pear, peach, and nectarine varieties, cuttings of unusual grapes and gooseberries, and scionwood.

The tastefully prepared and illustrated catalog is an unusual listing. Readers who are interested in rare old varieties or exotic foreign strains will want to write to Robert Nitschke, Southmeadow Fruit Gardens, 2363 Tilbury Place, Birmingham, Mich., for a copy of his catalog.—Ed.

Why Not The Ozarks?

Dear Editor:

We moved here to the Ozarks about a year ago from Iowa. Our intentions were and are to raise pecans and maybe fruit.

We've acquired 40 acres and intend to plant an acre of pecan trees this fall and each spring and fall thereafter.

I have yet to find anyone who believes pecans will produce here, but can see no reason why they or any other fruit shouldn't grow in this area.

Joplin, Mo.

Don Sargent

Many fruits grow quite well in the Ozarks, according to Aubrey D. Hibbard, professor of horticulture, University of Missouri, and pecan trees will grow there, but they are not productive. Dr. Hibbard points out further that pecans grow very well on the bottom lands of the major streams surrounding the Ozarks. As far as climate goes, there is nothing wrong with the Ozark area in the production of pecans and other fruits. But the pecan tree apparently requires an abundant supply of moisture and the soils of the Ozarks are quite subject to drought late in the summer. This is the reason, he believes, why pecans are not productive throughout the Ozark mountain area.

The black walnut, he points out, will grow on areas which are too droughty for the production of pecans; although it will not do too well upon the very thin soils throughout the Ozarks and plantings of this nut should be confined to the better bottom lands along the streams.

It would be a good idea to check with your county agent concerning a source of water supply (for possible irrigation), and for some ideas on which fruits are best suited for growing in the area.—Ed.

Gourley Award Winner

Dear Editor:

Thank you so much for your letter with which you sent the \$100 for the Joseph Harvey Gourley award.

I am deeply grateful to American Society for Horticultural Science and *AMERICAN FRUIT GROWER* for selecting me for this award. It was my good fortune to do a part of my graduate work under Dr. Gourley at Ohio State, so it is indeed very thrilling and personally meaningful to receive the award which bears his name.

Davis, Calif.

Dillon S. Brown

See article about Dr. Brown on page 8.—Ed.

PRUNING MADE EASY

ON the Circle A Farm Orchard in Fort Atkinson, Wis., Allan Vosburg has developed a unique method for providing a portable source of air pressure for his pneumatic shear. He has attached the unit to a small garden tractor which supplies the power to operate it.

The motor provides a maximum of 1½ hp which easily handles the used refrigeration compressor that supplies a working pressure of 120 psi. The tank was made from a piece of pipe.

Placing the pipe in a horizontal position would probably result in a better balanced machine since this would lighten the forward load and provide a base when the compressor is removed from the tractor.

Mobility and economy are the chief features. No large tractor or truck motor is needed to transport the unit. The operator can move it from tree to tree without accelerating the motor which runs only fast enough for efficient cooling.

Removing one bolt and sliding a cross bar from notches in the tractor frame complete the detachment of the compressor from the tractor. Both parts of the machine are then available for independent use. The compressor can be used with an electric



Charles S. Vosburg, 79, easily operates this pneumatic shear. It is powered by a homemade compressor unit mounted on a garden tractor.

motor that has suitable controls at any source of electricity.

Paint spraying and tire inflation are other tasks that can be performed by this machine. The cost, exclusive of the tractor and shear, was under \$50 for parts and labor.

CUTTING TRUCK COSTS

THE Ford Division's Truck Marketing Department recently published a comprehensive reference handbook for owners of trucks, regardless of make or model. *Guide to Cutting Truck Costs* is the title. Free copies are available from Ford dealers.

DECEMBER, 1961

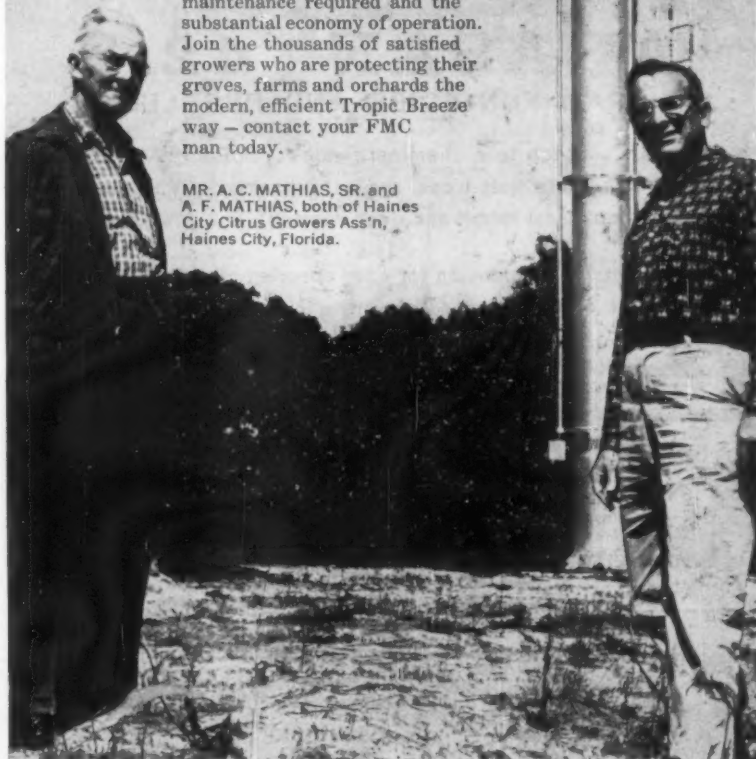
FMC tropic breeze wind machines provide effective protection against possible frost damage

The proof of protection by Tropic Breeze wind machines was demonstrated to the Haines City Citrus Growers Association last winter when their FMC wind machines operated for 8 freezing nights. During this period, no damage was sustained by trees within the Tropic Breeze machines' range; even the small new trees near ground level were protected.

This kind of coverage is only one of the points that are fast making FMC Tropic Breeze wind machines the favorite of growers throughout the country. Other important features are the inherent quality

of FMC construction, the low maintenance required and the substantial economy of operation. Join the thousands of satisfied growers who are protecting their groves, farms and orchards the modern, efficient Tropic Breeze way — contact your FMC man today.

MR. A. C. MATHIAS, SR. and A. F. MATHIAS, both of Haines City Citrus Growers Ass'n, Haines City, Florida.



Putting Ideas to Work



FMC CORPORATION, FLORIDA DIVISION
Fairway Avenue, Lakeland, Florida

- ☐ Please send me sales literature on Tropic Breeze Wind Machines.
- ☐ Please have Sales Engineer contact me.

NAME _____

ADDRESS _____

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An unsuccessful attempt was made to control rabbit damage on this apple tree. When snow fell during the winter months the fence offered little protection, hence, many trees in this apple orchard were damaged.

Avoid Costly Animal Damage to Your Nursery Stock with

ARASAN® 42-S THIRAM FUNGICIDE AND REPELLENT

There's no top to a chemical fence... DuPont "Arasan" 42-S protects fruit trees, shrubs, ornamentals and nursery stock from rabbit and deer damage.

- ✓ A stable suspension for easy spraying
- ✓ One application protects three to six months
- ✓ A few cents protects hundreds of dollars investment



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Why make unnecessary trips to the mailbox?? Install a "MAIL-BOY", the fluorescent colored signal that pops-up automatically when you get mail. Works like a charm, saving many steps thru the weeks, especially in bad weather. A quality product now in use from Coast to Coast. Full instructions for easy mounting.

\$1.00 p'pd.

H. E. Products, Box 35, Chesterland, Ohio

GOURLEY AWARD WINNER

UNIVERSITY of California Pomologist Dillon S. Brown has won the Joseph Harvey Gourley memorial award and cash prize for 1961. Dr. Brown is professor of pomology on UC's Davis campus.



Brown

Each year the Gourley award and cash prize are presented by AMERICAN FRUIT GROWER for the best paper on pomology printed in the *Proceedings* of American Society for Horticultural Science. Established in 1950, the award commemorates the memory of Dr. J. H. Gourley, former president of ASHS and chief in horticulture at Ohio State University. Dr. Gourley served this magazine as editorial advisor for a number of years.

It is especially significant that this year's winner did graduate work under Dr. Gourley at Ohio State.

The winning paper, entitled *The Relationship of Temperature to the Growth of Apricot Flower Buds*, reports the results of an examination of the relation of temperature to the length of four periods in the growth of Royal apricot flower buds.

ASHS COLLEGIATE BRANCHES

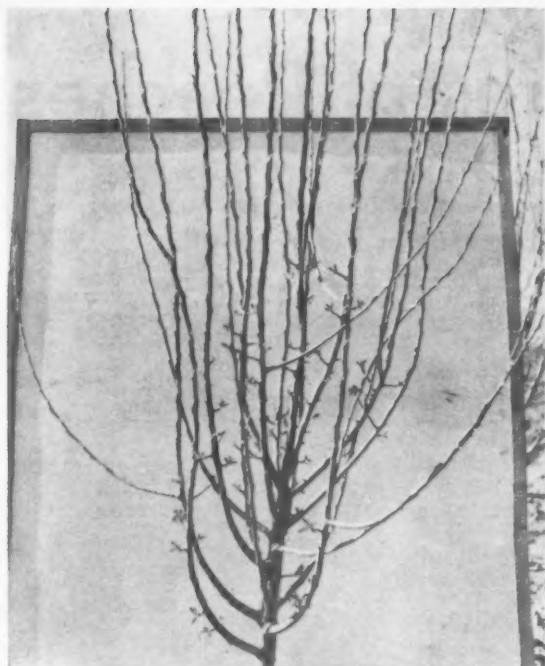
FOR the first time in the history of American Society for Horticultural Science undergraduate horticulturists presented scientific papers before the society. This innovation coincided with the granting of charters for undergraduate collegiate branches of ASHS at 22 universities and colleges.

Winner of the L. M. Ware award of \$100 for the best paper presented by an undergraduate was A. David Horne of Pennsylvania State University. His prize-winning paper was *Some Effects of Plant Growth Regulators CCC and AMAB on Delicious Apple Seedlings*.

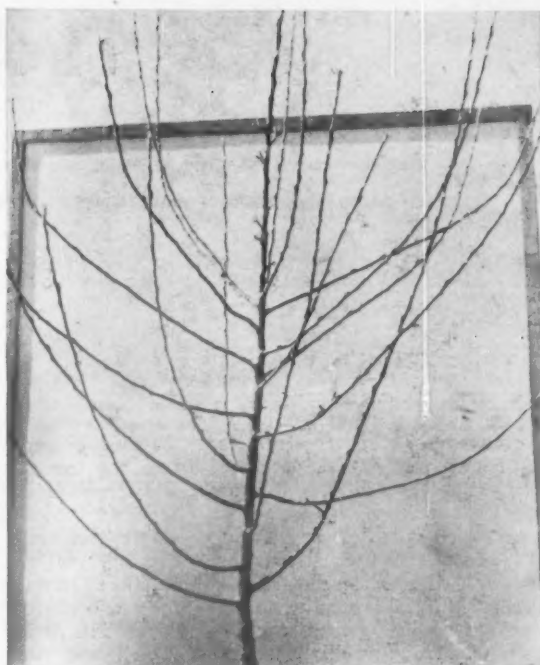
The undergraduate groups have established a national association of collegiate branches with Walter Dahlberg of Texas A & M College as president. Other officers are: Arthur Jones, Auburn University, vice-president; James B. Aitken, Clemson College, secretary; Nancy L. Sahnd, Purdue University, treasurer; A. David Horne, Pennsylvania State University, editor.

Regular meetings of the undergraduate scientists will be held each year in conjunction with ASHS.

AMERICAN FRUIT GROWER



Three years' top growth on Delicious apple tree headed at 42 inches with no further pruning.



Delicious tree planted at same time but cut back for trunk renewal at beginning of second year.

A NEW TRUNK . . . A NEW TREE

Trunk renewal will give your poorly-formed apple trees a fresh start

By LEIF VERNER
University of Idaho

THOSE troublesome apple trees that make poor growth or don't shape up well the first year after planting can be straightened out in good shape by trunk renewal. This operation, which is performed the next spring before growth begins, consists of cutting the tree back to about 2 inches above the graft union. This will force several new shoots above the graft. As soon as these are 1 to 2 inches long, select the best one and pinch off all the others. The shoot you save will form a new trunk.

This treatment is especially useful

in the case of a tree that has branched so poorly that it is impossible to make a good selection of scaffold limbs the first winter after planting. Examples are trees that have branched on only one side, or too high, or that have made generally poor growth. Trunk renewal will give such trees an amazing new vigor and a much better form.

Trees given a new start in their second year in the orchard by this method will usually catch up in size to trees planted at the same time and not cut back. There will be little or no difference in time of bearing, even though the trunk-renewal trees will have tops one year younger.

Trunk-renewal trees, even in Delicious, will develop very wide angles. Let the trees alone the first growing

season after the renewal treatment, then the following winter select scaffold branches and train the tree as you would any others.

Several precautions should be taken: 1) Cut the tree back to a stump above the graft union *before growth begins* in the spring; 2) after cutting the tree back, drive a stake into the ground to mark the position of the tree so it won't be damaged by tillage or other orchard operations; 3) spray or dust the ground with DDT for a distance of 2 feet around the tree to kill climbing cutworms that might chew off the new shoot; 4) don't allow the new shoots from the stub to get more than 2 inches long before you select the one that is to make the new trunk. **THE END.**

THE GOOD LIFE

On 11 Acres of Peaches

Peach grower Archie Downs learned to prune by trial and error—now has a successful peach enterprise. Here's Archie's story as told by his wife

By MARGIE E. DOWNS

ARCHIE DOWNS of Grand Junction, Colo., is one grower who is proving that you don't need a large orchard to be successful. For the last nine years, he has supported himself, his wife, and two children with an 11-acre peach orchard.

Archie was a novice at growing peaches when we purchased an old 11-acre orchard in Colorado's Grand Valley in 1952. His family had operated a diversified farm east of Colorado Springs and his only experience with peaches had been working in picking crews in the Grand Valley at harvesttime. He had also attended an agricultural school under the G-I bill.

As any novice would, Archie made mistakes. At the agricultural school he had been taught the long type pruning system. Under this method, the whole limb or twig is left on the tree or cut out completely. But Archie decided that he should also try the short type of pruning (every twig that is left on the tree is cut in half, regardless of how short it is, and the tree is flattened at the top). So he hired a few rows of trees pruned to the short type system and pruned the rest of the orchard to the long type system.

The result? The crop was cut off

since the two systems were tried the same year.

Since that disastrous experience, Archie has used the long type system recommended by Colorado State University. Less time is required in pruning and yield is increased as much as 2.1 bushels per tree. Under this system, the trees are more self-thinning and fruit is larger. Archie prunes from an 8-foot ladder. His trees are set 18 feet apart each way and they overlap.

There were certain problems in the old orchard that had to be overcome. The orchard had been heavily disked and the ground kept clean. This had killed out the alfalfa and kept the weeds from growing. Brush from prunings had been hauled away, leaving no humus or mulch in the soil. The previous owner had also used commercial fertilizer heavily, sealing the pores of the ground so it wouldn't absorb water well.

Archie planted the land back to alfalfa and put rye with it. He has planted peas for several years, and one year he planted vetch as a cover crop.

Disking is done about three times a year—in the spring to cover the peas, in June to disk the peas under, and just about harvesttime to knock down the weeds and alfalfa. Archie disks about 4 inches deep. Leaves, weeds, alfalfa, peas, and brush are put back into the ground. Prunings



Archie uses the long pruning system under which trees are more self-thinning, fruits larger.

that are not too large to rot in a couple of years are left on the ground.

Archie also uses some commercial fertilizer—about 200 pounds per acre of 14-14-14. He places it around each tree.

(Continued on page 29)



Before pruning (left) and after pruning. Archie does all his own pruning, follows Colorado State University recommendations.

SMALL POWER TOOLS FOR PRUNING

The job of pruning fruit trees has been made faster and easier with these small but powerful pruning devices

SMALL power tools are coming into their own for pruning. They are versatile and can be used effectively. Some recent developments in gasoline engine-powered and compressed air-powered tools, adaptable for both deciduous and citrus pruning, are shown here.

Gasoline engine-powered tools have the engine and cutting mechanism mounted together as a single unit. There are two general types, the chain saw and the reciprocating saw. Both are useful for cutting large limbs and for dead tree removal. They are heavy, however, and cannot be used to cut small branches and twigs.

Compressed air-powered tools have a small air motor mounted behind the blade on the end of a hollow tube. Air coming through the tube operates the air motor that turns the blade.

One of the most frequently used

air pruning tools is the lopper, which is adapted to removal of moderate size branches. Attempts to use loppers on larger limbs result in an undesirable crushing at the edges of the cut. These tools are used also for hedging citrus but, because only selective cuts can be made, the operation is relatively slow and costly.

The Ackley chain saw is 9 inches long and can cut larger limbs than the lopper. It is narrow, which permits its use in sharp-angled crotches. It cannot be used for hedging citrus.

A tool used for similar purposes is the Miller-Robinson reciprocating saw. It cuts more slowly than the chain type and is limited to smaller limbs. On the other hand, it makes a smoother cut and requires much less air than the chain type.

Names and addresses of manufacturers of equipment shown here are listed on page 19. All photos except Homelite and Wright are courtesy of University of Florida.



The Homelite chain saw is gasoline engine-powered. It is particularly useful in orchard operations for cutting large limbs and tree removal.



Adapted for selective removal of branches, the air-powered lopper can prune medium limbs.



Wright's gasoline engine-powered reciprocating saw does heavy orchard pruning jobs with ease.



Powered by compressed air, Miller-Robinson's reciprocating saw fits into very narrow crotches.



Pruning rig was constructed at Citrus Experiment Station, Lake Alfred, Fla., for hedging citrus.



Ackley's air chain saw can be used with 12-foot extension. Note size of cuts at "a" and "b."

HORT MEETINGS

ARE WORTH THEIR "WEIGHT IN GOLD"

DON'T MISS 'EM!



Joint meeting of century-old Ontario association and APS sets the stage for profitable winter get-togethers



THE history of the fruit industry in North America is closely linked with the development of the horticultural societies. It was through the efforts of amateur horticulturists who banded together in the early days of fruit growing in the 19th century that the commercial fruit production of today got its start.

One of the oldest societies in this hemisphere—Ontario Fruit and Vegetable Growers' Association—is celebrating its 103rd anniversary in January. The two-day annual convention at King Edward Hotel in Toronto will be a far cry from the first meeting in January, 1859, when 18 men sat down together in Mechanics Hall in Hamilton, Ont., and brought the association into being. The membership today is more than 12,000.

Objectives of the association as stated in its constitution of 1859 were "the advancement of the science and art of fruit culture by holding meetings for the exhibition of fruit and for the discussion of all questions relative to fruit culture, by collecting, arranging, and disseminating useful information, and by such other means as may from time to time seem advisable."

Today the emphasis has shifted from the culture of fruit to the marketing of fruit. The 1963 convention will include a half-day session on domestic marketing problems and another half-day session on export markets.

Meeting jointly with the Canadian association in January is another old-timer, American Pomological Society, which was founded in 1848. This society is devoted primarily to the improvement of fruit varieties.

Among the speakers invited to participate in the marketing sessions are M. Gilchrist, commissioner of mar-



Ontario Fruit and Vegetable Growers' Association President G. Ross Bruner, left, is prominent fruit, vegetable, and greenhouse grower in Ruthven, Ont. Able secretary-treasurer of the association is Dr. John F. Brown, Toronto.

keting for British Columbia; E. M. Biggs, assistant deputy minister of agriculture (marketing) in Ontario; and Ivor Crimp, vice-president (merchandising) for Dominion Stores.

A half-day session conducted by APS will feature Dr. H. B. Tukey, head, department of horticulture at Michigan State University, and associate editor of *AMERICAN FRUIT GROWER*, who will speak on new developments in horticulture; Leon Havis, USDA, who will discuss recent developments in peach culture; and L. G. Klein, New York State Agricultural Experiment Station, who will lead a round table on fruit varieties.

The Horticultural Experimental Station, Vineland, Ont., and New York State Agricultural Experiment Station will co-operate in setting up an educational display of old and new apple varieties and seedlings.

It's get-together time for fruit growers in all areas of the country. Some hort meetings have already been held—others are still in the formative program stage.

In Oklahoma, where pecans represent the most valuable horticultural crop, the central theme of Oklahoma Pecan Growers Association's 32nd annual meeting on December 12-13 at

Tulsa Hotel will stress producing and marketing better quality pecans through better production and marketing practices. Henry Bucklin, executive secretary, National Pecan Shellers and Processors Association, Chicago, Ill., will discuss the national nut situation, and Sam Dunn, field director, Goldkist Pecan Association, Waycross, Ga., will talk on buying pecans on grade.

An important feature of the meeting will be displays and demonstrations of all types of equipment used in the production, harvesting, and shelling of pecans. Land clearing equipment, sprayers, harvesters, and small shelling equipment as well as other smaller pieces of equipment used in the production and handling of pecans will be included.

A growers' panel led by Dr. Frank B. Cross, a past president of the association and former head of Oklahoma State's horticulture department, will be a highlight of the meeting.

At Maryland State Horticultural Society's 64th annual meeting January 4-5 at Hotel Alexander, Hagerstown, the chief speaker will be Dr. J. R. Magness, former head of USDA's Fruit and Nut Crops Research Branch, who will speak on the present and future national trends in apple production.

Other discussions will cover recent research results in control of weeds around young trees, five years' investigations in chemical thinning of peaches, training young trees to wider-angled branches, improved weather reporting for area growers, and modern packing house equipment and arrangement.

New plans and concepts of National Apple Institute will be outlined by Executive Vice-President
(Continued on page 18)

Bill Hermann DOUBLES HIS APPLE YIELD



Bill Hermann with extra fancy Macs. He finds good packaging and promotion increase sales.

WANT to nearly double your apple output per acre? Then consider Massachusetts fruit grower Bill Hermann's orchard management program. In the last few years, Hermann has been harvesting nearly twice the usual yield-per-acre from one specially managed 15-acre block of trees.

A veteran fruit grower, Hermann is well known for his studied approach to fruit production. All aspects of his orchard operation, from planting to pest control, receive detailed analysis and thought. A day's spray effort is often preceded by half an hour of careful planning to obtain the most effective and efficient insect and disease control.

Neighbors point to Bill Hermann as an innovator. He's always alert to new ideas and materials that will enable him to do a better job, save time, or cut costs. His idea for a new pruning system is an outstanding example of Hermann's ingenuity.

On his 250 acres of orchard in Harvard, Mass., Hermann had planted a 15-acre block of trees in 1937, mainly McIntosh and Richared. The

Bill experimented with pyramid pruning in a 15-acre tract in his 250-acre orchard. The trees responded by producing more apples

By JONAS HOWARD



Pyramid or Christmas tree shape of Hermann's apple trees is his trademark. This pruning system exposes bearing surface to sun, allows good spray coverage.

trees were set in the usual 40x40-foot square, with a filler tree in the middle.

When trees are near full bearing size, a grower generally pulls out alternate rows on the diagonal. Hermann didn't.

"We decided to prune the trees back severely to see what would happen. These are standard trees," he explains, "but we keep them smaller by hard pruning each year.

"On nearby blocks we harvest between 400 and 500 boxes of apples per acre. On this specially pruned block we usually come close to 1000 boxes per year."

Together with Bud Wood, his orchard foreman, Hermann devised and perfected the new pruning system. They wanted trees low for easier

management and harvesting. In addition, they were aiming for larger yields of high quality, bright red apples.

Hermann wanted his pruning system to provide maximum bearing surface exposed to sunlight and allow good spray coverage. He began training trees on a central leader system when they were still young.

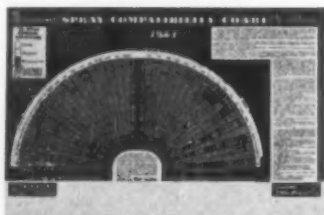
"We began stepping branches back until we obtained a pyramid or Christmas tree shape. By maintaining a 55- to 60-degree angle on these trees, all branches are open to plenty of sunlight," Hermann explains. "And by pruning to this angle we automatically control tree height."

Power pruning, using a Miller
(Continued on page 14)

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DOUBLES HIS APPLE YIELD

(Continued from page 13)

Robinson power take-off, makes this annual job easier, Hermann states. He doesn't need a platform to reach the tops of the trees.

"It's easier to check tree shape from the ground," Hermann notes. "One of us generally supervises from the ground while the tree crew does the shaping."

To keep production high, Hermann feeds trees well with 300 to 500 pounds of complete 10-10-10 fertilizer per acre. Suckers are eliminated each year when pruning, and his balanced fertilizer program doesn't encourage excessive growth.

One result of the pyramid style pruning is the heavier set of fruit on the lower branches. In fact, all branches seem to carry more fruit than those on trees pruned according to conventional patterns.

When pruned, the trees have about a 25-foot skirt. Although they are presently planted 27 feet apart, Hermann believes 30 feet would be better. He is starting new trees 30 feet apart.

Located near large population centers, Hermann has concentrated on the fresh fruit market. To meet demands of quality-conscious shoppers, he puts as much emphasis on producing quality apples as he does on maintaining high production.

A methodical pest control program throughout his orchards is Hermann's key to first quality apples.

"We tailor our pesticide applications to the weather and the problem," he explains. "Basically we follow a glyodin spray program to prevent apple scab." When weather conditions are ripe for scab, Hermann can field two 500-gallon Bean sprayers. He applies glyodin in a 4X concentration.

"We adopt other state spray recommendations as they fit our situation," he points out.

"Apples for the fresh market need a clean, attractive finish. We check our orchards daily to spot problems before they become serious. That way we avoid trouble."

On the lookout for new ideas, Hermann was one of the first growers in the Northeast to field test new Sevin insecticide against apple insects. He reports that Sevin on sensitive Golden Delicious gave as good insect control as materials previously available.

In his nonbearing orchards, Hermann has found that a granular herbicide, Simazine 4 G, applied around young trees keeps grass and weeds down well. By depriving mice of shelter, he is able to prevent damage to his new plantings.

An innovator in the orchard, Hermann also is well-known for his leadership in apple marketing efforts.

He is chairman of the marketing committee of Massachusetts Fruit Growers Association.

"To move apples at a good price you have to promote them," Hermann states. He cites both the grower-financed Yankee Brand and Breath-of-Spring CA McIntosh merchandising programs by the J. P. Sullivan organization as examples of sound promotion. The yardstick of an effective marketing program is whether it moves your apples and earns you a premium price, Hermann observes.

From his 55,000-bushel storage, the Massachusetts grower achieves a longer sales season. Conventional storage capacity totals 35,000 bushels. CA capacity is 20,000 bushels.

"Here in the Northeast we should concentrate on growing the products that do best under our conditions. We can produce McIntosh better than any other variety. And we can grow them better than any other area can," Hermann states. He proposes concentrating on this natural asset.

"As growers we should aim to improve marketing techniques," he points out. Looking ahead, Hermann foresees that many more apples will be washed and scrubbed. He believes that growers must work to correct handling problems with tender McIntosh apples and co-operate more closely with marketing organizations to assure the food shopper of an appetizing and attractive product.

Modern fruit marketing begins in the orchard, Hermann observes. His sound management program, new pruning system, and careful spray efforts are an excellent example of ways to maintain profits in today's competitive fruit business. THE END.



STOOP SAVER

Grass cutter attachment on gasoline-driven brush cutter (Hoffco, Inc., Richmond, Ind.) is used on Knight Farm, Greenville, R. I., to trim grass along edge of buildings, under fruit trees.

AMERICAN FRUIT GROWER

CHERRIES

Outlook for Pruning

GROWERS will need to make some changes in cherry orchard pruning practices if they are to get maximum benefits from harvesting equipment. This is the opinion of New York State Agricultural Experiment Station scientist John C. Cain.

He recommends removal of low-hanging branches, pruning trees to a maximum of three or four branches to be shaken by machine, and pruning new plantings to produce trees more suitable for mechanical harvesting.

The Big Threat

CALIFORNIA cherry growers are trying to fight a multitude of diseases that threaten to eliminate the sweet cherry industry from the state. Accumulated soil pests, nematodes, a host of virus diseases, and fungus diseases are taking a steady toll of trees of all ages. On a per acre basis, the cherry industry feels it has lost more trees than have pear growers to decline.

What are growers doing about it? They have joined forces with canners, shippers, and briners to form a new cherry association with the aim of fighting the disease problems. Called San Joaquin Cherry Growers and Industries Foundation, the association will also investigate means of mechanically harvesting the crop.

Even before the entire California cherry industry was contacted, there was a 75 to 80% signup in support of the new foundation. Growers are assessing themselves \$1 per acre. Shippers, canners, and briners contribute on the basis of volume.

PEACHES

Hedgerow Pruning

"In three years of tests in peach orchards we have shown that mechanized winter pruning cuts costs from \$20 to \$30 per acre," says Norman Ross, Stanislaus County, California, farm advisor. Ross was one of the first to adapt mechanized "hedgerow" pruning from citrus—where it is an accepted practice—to deciduous fruit trees.

Two additional advantages of the new method: 1) the relatively severe pruning has in many cases improved

the subsequent crop by removing excess young fruit before it sets on the tree, and 2) slicing off all the lush, vertical growth which shoots up each season from the top of the tree—and in some cases actually lowering the permanent height of the tree—has resulted in far more bearing fruit wood lower down, where the crop is easier to handle.

Ross points out that the ultimate pruning technique may include summertime mowing of lush topgrowth. Experiments have indicated that fruit size is not affected and that fruit wood growth in the lower part of the tree is substantially encouraged.



Norman Ross inspects clipped-off top of peach tree and vigorous, low-growing fruit wood.

"Both clipping of the current season's top shoots and winter topping result in more growth of lower fruiting wood," Ross says. "That alone may be enough to justify the practice."

FRUIT CONDITION

IN recent years fruit condition and factors which influence it have become of increasing concern to growers and handlers.

The rising costs of production have made it imperative that fruit growers adopt the most modern practices and techniques in order to provide greater production per unit, greater efficiency in handling, and greater control over marketing.

These modern practices and techniques were discussed during a conference on Factors Affecting Fruit Condition, this spring at Rutgers University. Now a report on the conference is available in limited supply. Copies may be secured for \$1 from Warren C. Stiles, Conference Chairman, Department of Horticulture, Rutgers University, New Brunswick, N. J.

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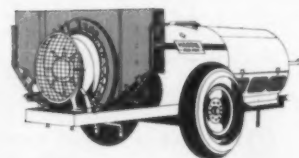


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Manufacturers' exhibits at horticultural association shows give growers an opportunity to get acquainted with what's new in pesticides, herbicides, orchard equipment and supplies.

HORT MEETINGS...DON'T MISS 'EM

(Continued from page 12)

James Moore, Dr. A. H. Thompson, University of Maryland, will give a report, illustrated with photographs, of apple, peach and pear production and problems in the West and Northwest.

The theme of Indiana Horticultural Society's 101st annual meeting is "Greater Profits Through Increased Yields Per Acre." The meeting will take place January 9-11 during Horticulture Week at Purdue University, Lafayette, in conjunction with other participating organizations. Commercial exhibits will be combined to allow growers with diverse interests to observe a wide array of exhibits.

Among the speakers scheduled for the meeting are H. D. Hootman, Michigan State University, who will discuss ways to increase production; A. L. Kenworthy, also of Michigan State, who will report on Indiana's apple orchard nutritional survey; and Robert Anderson, orchardist in Covert, Mich., who will discuss training and culture of peach trees. A panel discussion, moderated by the association's secretary-treasurer, F. H. Emerson, will be conducted on the subject, "Is Fruit Washing the Next Change in Packing Operations?"

Still in the planning stage is the 67th annual meeting of Massachusetts Fruit Growers' Association to be held at the State Armory in Gardner on January 10-11. In general, it will cover three areas of orcharding—production, marketing, and pest control.

Also tentatively set up is North Carolina State Apple Growers Association's annual meeting at Battery Park Hotel, Asheville, on January 10. Two panel discussions are sched-

uled, one on the future of apple processing in the Southwest, and the other on improving apple production. Talks are planned by A. L. Kenworthy, Michigan State University, on how to recognize a starving tree and feeding for production, and by H. Brooks James, dean, school of agriculture, North Carolina State College, on apples in our agricultural economy. James Moore, of National Apple Institute, will discuss his organization's national apple promotion plans.

New York State Horticultural Society will hold its 107th annual meeting at Rochester War Memorial on January 16-18 and its eastern meeting at Kingston Armory January 23-25. The main speaker at both meetings will be William A. Luce, well-known county extension agent in Yakima, Wash. He will talk on producing high-quality apples in Washington and innovations in the handling of the apple crop in the Northwest.

In Virginia the trend is back to a balanced program of production and marketing topics. Virginia State Horticultural Society, which has emphasized marketing problems primarily during its past several meetings, has planned a more varied program for its 66th annual convention January 29-31 at Hotel Roanoke.

Growers will hear William A. Luce discuss apple production, dwarf tree plantings, and hand pollination in the Northwest. Other speakers will talk on production trends in the Northeast and in Michigan, how to sell more peaches, new trends in retailing, research in mechanical harvesting of apples, and improved pest control methods.

During the 69th annual meeting of New Hampshire Horticultural Society at the Highway Hotel in Concord on January 30, a panel discussion will be featured on harvesting practices. The departments of horticulture and agricultural chemistry at University of New Hampshire will report on the apple nutrition project which they are conducting jointly, and talks will be given on apple promotion and the future of the McIntosh apple.

The calendar of coming events in this issue gives the dates of other meetings to be held in 1962. Programs in the making promise stimulating get-togethers for growers and an opportunity for swapping experiences in growing and marketing fruit. Growers have been doing just that for over a century, a recommendation in itself that meeting with fellow fruit growers pays off. Don't forget, too, that entertainment at the meetings includes programs for the ladies. THE END.

Calendar of Coming Meetings & Exhibits

Dec. 1-2—Iowa Fruit Growers Association annual meeting, Memorial Union Building, Iowa State University, Ames.—Winton Etchen, Sec'y-Treas., State House, Des Moines.

Dec. 4-6—New Jersey State Horticultural Society annual meeting, Dennis Hotel, Atlantic City.—Ernest G. Chris., Sec'y-Treas., P.O. Box 231, New Brunswick.

Dec. 4-6—Washington State Horticultural Association annual meeting, Liberty Theater, Wenatchee.—Dr. John E. Snyder, Exec. Sec'y, Washington State University, Pullman.

Dec. 5-7—Michigan State Horticultural Society annual meeting, Civic Auditorium, Grand Rapids.—Dr. A. E. Mitchell, Sec'y, Michigan State University, East Lansing.

Dec. 6-7—Connecticut Pomological Society annual meeting, Restland Farms, Northford.—B. T. Peck, Sec'y, University of Connecticut, Storrs.

Dec. 8-9—Utah State Horticultural Society annual convention, Utah Hotel, Logan.—Anson Cell, Sec'y, Utah State Agricultural College, Logan.

Dec. 8-9—Kansas State Horticultural Society annual meeting, Broadview Hotel, Wichita.—Jerry Amstein, Sec'y, Kansas State University, Manhattan.

Dec. 11-12—Wisconsin-Minnesota Fruit Growers annual meeting, Holiday Inn Motel, La Crosse, Wis.—George C. Klingbeil, Sec'y, University of Wisconsin, Madison.

Dec. 11-14—Weed Society of America's North Central Weed Control Conference, Jefferson Hotel, Memphis, Tenn.—K. P. Buchholz, Pres., University of Wisconsin, Madison.

Dec. 12-13—Peninsula Horticultural Society annual meeting, Elks Hall, Salisbury, Md.—Robert F. Stevens, Sec'y, University of Delaware, Newark.

Dec. 12-13—Oklahoma Pecan Growers Association annual meeting, Tulsa.—E. L. Whitehead, Sec'y, Oklahoma A. & M. College, Stillwater.

Dec. 12-14—Tennessee State Horticultural Society annual meeting, Jackson.—B. S. Pickett, Sec'y-Treas., University of Tennessee, Knoxville.

Dec. 13—Fruit Day, University of Delaware, Newark.

Dec. 13-14—Marketing tour to New York City.—Robert F. Stevens, University of Delaware, Newark.

Dec. 13-15—American Society of Agricultural Engineers winter meeting, Palmer House, Chicago, Ill.—Julian J. Jackson Agency, 11 S. La Salle St., Chicago 3, Ill.

AMERICAN FRUIT GROWER

Dec. 15—Kentucky State Horticultural Society winter meeting, Paducah.—W. W. Magill, Sec'y, University of Kentucky, Lexington.

Jan. 3-4—Missouri State Horticultural Society annual meeting, University of Missouri, Columbia. W. R. Martin, Jr., Sec'y, University of Missouri, Columbia.

Jan. 3-5, 1962—Western Washington Horticultural Association annual meeting, Fruitland Grange Hall, Puyallup.—Morrill Delano, Sec'y, 742 County-City Building, Tacoma 2.

Jan. 4-5—Maryland Horticultural Society annual meeting, Hotel Alexander, Hagerstown.—A. F. Vierheller, Sec'y, University of Maryland, College Park.

Jan. 5-6—Western Colorado Horticultural Society annual meeting, Civic Auditorium, Grand Junction.—F. J. Randall, Sec'y-Treas., P. O. Box 487, Grand Junction.

Jan. 9-10—Ohio Pesticide Institute, Nationwide Inn, Columbus.—Robert E. Trece, Dept. of Entomology, Ohio Agricultural Experiment Station, Wooster.

Jan. 9-11—Indiana Horticultural Society annual meeting, Purdue Memorial Center, Purdue University, Lafayette.—Frank Emerson, Sec'y-Treas., Purdue University, Lafayette.

Jan. 10-11—Massachusetts Fruit Growers annual meeting, State Armory, Gardner.—A. P. French, Sec'y, University of Massachusetts, Amherst.

Jan. 10-11—North Carolina State Apple Growers Association annual meeting, Battery Park Hotel, Asheville.—R. B. Phillips, Pres., Bakersville.

Jan. 15-17—American Pomological Society joint meeting with Ontario Fruit and Vegetable Growers Association, King Edwards Hotel, Toronto, Ont.—George Kessler, Sec'y, APS, Michigan State University, East Lansing.

Jan. 16-18—New York State Horticultural Society meeting, Rochester War Memorial, Rochester.—T. E. LaMont, Sec'y-Treas., Albion.

Jan. 18-19—Fruit and Vegetable Short Course, New Mexico State University, University Park.—J. V. Enzie, Dept. of Horticulture, New Mexico State University, University Park.

Jan. 23—North Carolina Mutual Peach Growers Society annual meeting, Sandhill Research Station, Jackson Springs.—J. C. Wyatt, Sec'y, Candor.

Jan. 23-25—New York State Horticultural Society meeting, Kingston Armory, Kingston.—T. E. LaMont, Sec'y-Treas., Albion.

Jan. 23-27—New Jersey Farmers Week, Trenton.—Phillip Alampi, Sec'y, New Jersey Department of Agriculture, Trenton 25.

Jan. 29-31—Ohio State Horticultural Society annual meeting, Netherlands Hilton Hotel, Cincinnati.—C. W. Ellenwood, Sec'y, Rt. 2 Wooster.

Jan. 29-31—Virginia State Horticultural Society annual meeting, Hotel Roanoke, Roanoke.—John Watson, Sec'y, P. O. Box 718, Staunton.

Jan. 30-Feb. 1—New Hampshire State Horticultural annual meeting, Highway Hotel, Concord.—E. J. Rasmussen, Sec'y, University of New Hampshire, Durham.

Feb. 5-7—State Horticultural Association of Pennsylvania annual meeting, Yorktowne Hotel, University Park.—J. U. Ruef, Acting Sec'y, Pennsylvania State University, University Park.

Feb. 6-7—South Carolina Peach Council annual meeting, Wade Hampton Hotel, Columbia.—Roy J. Ferree, Sec'y-Treas., Clemson College, Clemson.

Feb. 12-15—United Fresh Fruit and Vegetable Association annual convention, Statler Hilton Hotel, New York, N.Y.—Association headquarters, 777 14th St., N.W. Washington 5, D.C.

Feb. 22-23—West Virginia State Horticultural Society annual meeting, Martinsburg.—Carroll R. Miller, Sec'y, 123 S. Church St., Martinsburg.

Feb. 25-28—National Peach Council convention, Traymore Hotel, Atlantic City, N.J.—Carleton Heritage, Pres., Box 516, Carbondale, Ill.

Feb. 25-28—Illinois State Horticultural Society and Illinois Fruit Council annual meeting, Traymore Hotel, Atlantic City, N. J.—Bob Edwards, Sec'y-Treas., 302 W. Walnut St., Carbondale.

May 3-5—Shenandoah Apple Blossom Festival, Winchester, Va.—J. K. Robinson, Pres., Winchester.

WHERE TO BUY PRUNING EQUIPMENT

Addresses of pruning equipment manufacturers mentioned on page 11.

Homelite, Div. of Textron, Inc., Port Chester, N. Y.

Wright Power Saws Div., Thomas Industries, Louisville, Ky.

Miller-Robinson Co., 7007 Avalon Blvd., Los Angeles 3, Calif.

Ackley Manufacturing Co., Portland, Ore. (National distributor: Weed Control Service, Inc., 11564 Southwest Pacific Highway, P.O. Box 6527, Portland 23, Ore.)

DECEMBER, 1961

...the '362' is best
for you in '62!



FRIEND

**MANUFACTURING
CORP.**
GASPORT N.Y.

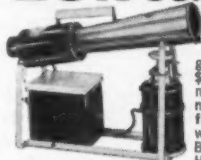
TESTED for more than two years, and warmly APPROVED by every orchardman who's used one, the low-profile FRIEND

Airmaster '362' offers you the best sprayer value for 1962.

Big, powerful Wisconsin 56 hp. air-cooled engines develop a fast 38,000 cfm. of air volume and a 400 gal. tank means that you can do a lot of spraying between refills. The low silhouette means less tree and fruit damage, too.

If you want top-of-the-basket fruit, look into this top-of-the-market sprayer. See your local dealer or write us.

ZON SCARECROW



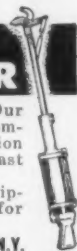
B. M. LAWRENCE & CO.
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Stop bird damage to all crops for less than the cost of one shotgun shell per day. Price \$59.50. At farm implement, seed dealers. If not available in your area, free delivery from our warehouses in Buffalo, Baltimore, Chicago, Houston, Tampa, San Francisco. Also all Canadian provinces.

PRUNE with Orchardkraft Air-Power PRUNER

"A little air does a lot of work." Our new Model G pruner is very economical with air, simpler in construction with lots of power. Model E for fast work on small cuts. Made by makers of orchard equipment for over 50 years. Write for circular.

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SELECT NOW FROM OUR COMPLETE LINE OF

"WASHINGTON'S FINEST VARIETIES"

EARLY RED HAVEN PEACH

New Discovery—Early ripening twin of Red Haven Ready to pick about 14 days ahead of its parent. Free full color catalog—Write today for your copy.

Van Well Nursery

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BARTLETT COMPOUND LEVER

SQWE combination TREE TRIMMER and POLE SAW

Double leverage action of pulley gives extra power. Head sections 30" overall, square end mount easily converted from pole pruner to pole saw for larger limbs and extra lengths can be added to make desired length. Capacity of pruner 1 1/4" with drop forged, side-cutting blade. Saw will handle larger branches. Has 16" curved blade with peg teeth. Other styles available.

The SQWE combination with two 6 ft. Laminated Sitka Spruce sections with brass connecting sleeves is recommended since it can be used as an 8 1/2' pole using one section, or a 14 1/2' pole by using two sections. Laminations add strength.

Price complete \$47.00 delivered in U.S.A.

No C.O.D.'s please. Free catalog on request.
Write for booklet—"PRUNING"—Helpful Hints for use in Horticultural Work, 25c.

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POST HOLE • TREE PLANTING



9"—\$117.50
12"—\$122.00
18"—\$132.00
24"—\$142.00
F.O.B. EUGENE

Rugged glow-steel blades dig in anywhere—rocks, clay, sand or mud. Heavy steel gears. Backed by replacement guarantee. Simple to mount on tractor power take-off.

Dealers Wanted

REAR'S MFG. CO., INC.
755 RIVER AVENUE EUGENE, OREGON
Rear's—the last word in farm equipment.

End Bird Damage to Your Crops!

WITH THE NEW, IMPROVED MODEL M-2

SCARE-AWAY



Thunderclap
EXPLOSIONS
clears fields
of birds
and pests

Proven effective against all birds and small animals. Scare-Away brings guaranteed protection to your orchards and crops. Check these features: • Operates for less than 15c per day • Rugged all steel heavy duty unit • Uses carbide or acetylene, no wick • Sets at regular or irregular intervals • Service unit only once a day. The M-2 is the loudest and most reliable bird and animal scare device ever made. Retail cost is low. Automatic timer available. Immediate delivery. Freight prepaid from our warehouses at San Francisco, New Orleans, Baltimore, Orlando, Chicago, and Greenville. If no dealer near you, write to:

REED-JOSEPH CO., HG. 1 NORTH, GREENVILLE, MISS.
FOR DEALER INFORMATION, WRITE ABOVE ADDRESS

BERRIES

Berry Growing

BLACKBERRY and raspberry growing in Ohio—from selecting the planting site and varieties, to pest control, pruning, and harvesting—is covered in *Bramble Fruit Culture*, Bulletin 411, published by Agricultural Extension Service, Ohio State University, Columbus, Ohio. Authors are Robert G. Hill, Jr., professor of horticulture, Ohio Agricultural Experiment Station, and Eldon S. Banta, Ohio extension horticulturist.

Mexican Strawberries

MEXICO is supplying an increasing percentage of the frozen strawberries sold in U. S. markets. During 1960 the U. S. imported 12,500 tons from Mexico compared with 3000 in 1952. This year the figure is expected to reach 18,000 tons.

These figures showing the increase in strawberry production south of the border are included in a recent report of USDA's Foreign Agricultural Service.

The wage rate for field workers in Mexico, the report further points out, is 96 cents per eight-hour day, and growers receive 6 cents per pound for fresh strawberries with stems delivered to the processor. Berries with stems removed are .3 cents per pound higher. It costs from .2 to .4 cents per pound to transport the fruit from the field to the processing plant.

Practically all the frozen berries exported to the U. S. from Mexico are grown in the states of Guanajuato and Michoacan on small farms which average about 40 acres. Strawberry acreage has been on the increase in these districts the past few years.

Almost all the strawberries are grown under contract for sale to a processor or packer who loans the grower enough to cover planting costs. The grower pays a monthly interest rate of 1% and the loan is repaid upon sale of the crop.

A double hill system of planting is used instead of the single. This increases the number of plants per acre from 15,000 to 28,000. It also helps keep moisture in the soil. Fields are irrigated and fertilized. About 90% of the plants are of the Klondike variety.

Strawberry production in Mexico should continue to increase. New land is readily available and new irrigation projects are being built by the Mexican government. Well water is also available in some areas.

Credit is being extended and prices received by growers have been

favorable. Many are shifting their production from other crops to strawberries.

With the cheap labor and low production and processing costs in Mexico, U. S. growers may find Mexican competition growing stronger in the years ahead.

GRAPES

Do-It-Yourself Fertilizer Test

A GRAPE grower may soon be able to make his own nitrogen fertilizer tests. Research at University of California indicates that a quick test can now tell when many grape varieties need nitrogen fertilizer.

To make the test 20 leaf petioles and leaf stems are selected from a 4- to 5-acre block after 20% of the clusters are blooming and before two-thirds of the berry caps have fallen. These petioles are taken directly opposite a flower cluster.

The stem end of the petiole is cut and a solution of 1% diphenylamine-sulfuric acid reagent (La Motte Chemical Products Co., Chestertown, Md.; Agricultural Technical Service, Fresno, Calif.; B. H. C. Crop Service, Inc., Visalia, Calif.) is applied. The resulting blue color or lack of color can tell if enough, too much, or not enough nitrogen fertilizer has been picked up from the soil.

Use of the reagent is still experimental and growers interested in trying the test should consult with their local agricultural extension service or experiment station.



SAVED BY A NET!

Farm Advisor Paul D. La Vine, in Stanislaus County, California, uses a 31-inch-high plastic coated netting to protect young grapevines from rabbit damage. The simple vine protector, formed in a tube, can be obtained for about 6 cents. Manufacturer is Bemis Bag Company, 408 Pine St., St. Louis 2, Mo.

AMERICAN FRUIT GROWER



BY HENRY BAILEY STEVENS

U-pik But Not Ur-own WHILE Thomas L. White of Chardon, Ohio, was seeing to his peach exhibit at the county fair over the Labor Day weekend, his leased orchard of 1000 trees at Painesville was invaded by motorists. The story had spread that the trees were in the path of the new expressway and were about to be bulldozed, as indeed had been the case with a small section earlier in the year. More than 100 parties came by day and night, some picking late under auto headlights, to loot a sizable portion of the whole crop.

Mr. White knows that an orchardist must be firm in curbing any theft of his year's labor. With police help he was able to learn some of the license plate numbers; but while he pondered, the telephone rang. The caller identified himself as one of the culprits, apologized in detail for the misunderstanding, said he had gotten 3½ bushels in the picking spree and insisted on paying the market price for them.

"This is no ordinary case of thieving," Mr. White concluded. "I'm not going to prosecute these other folks. There is a lot of good and honesty in the world if you give it a chance to come out. I think many more would pay for the peaches if they knew the truth of the matter, and they'd feel a lot better about it."

So with the help of the *Painesville Telegraph*, from which we get the story, Mr. White invited all pickers to make anonymous contributions of the value of their takings to the local 4-H camp, which he organized a decade ago and to which he has donated much land and money. The county might well nominate him as Mr. Santa Claus of 1961.

Trials of a Plant Importer BACK in 1936 Carl Weschcke and his father financed a search into the Carpathian Mountains of Poland for the hardiest of English walnuts. Rev. Paul C. Crath, of Toronto, made the difficult trip and shipped that winter some 800 trees, 4000 scions, and about 500 pounds of walnuts from selected trees—all *juglans regia*. The

Weschckes planted the trees and nuts in their Hazel Hills Nursery (River Falls, Wisc.) and grafted the scions onto black walnut and butternut stock with reasonable success.

All went well for a few years, but then they began to find insect damage in the new growth. The culprit proved to be a curculio whose native host is the butternut (*juglans cinera*).

Confronted by successive crop failures, the beetle had found that it could complete its metamorphosis in the small branches and leaf-stems of English walnut and heartnut. Arsenate sprays effective against apple and plum curculios did not give control.

New growth was set back four to six weeks, and late growth did not properly mature. Many trees that had previously withstood the severe winters now succumbed. Not until seven years ago was control finally achieved—thanks to state university advice—by applications of aldrin.

The remaining trees gradually gained in height. In 1958 some of them bore walnuts, which dropped prematurely—a common practice, it proves, when pollination is from black walnut, heartnut, or butternut. The English walnut is fastidious and demands racially pure pollen. Precautions against this in the future would have to be arranged to the extent that the nursery wanted a demonstrable crop out of its mixed plantings.

In the rush of nursery work this spring the aldrin spray was missed. Carl Weschcke worried about renewed insect damage, only to find that with butternut trees again in business the curculio had shifted back to its old host and had let the imported walnuts alone! Terminal growth of the walnuts, in spite of a late spring frost, exceeds that of any previous year, some adding as much as 3 feet.

"I am in a quandary now as to procedures for next season," Weschcke writes, "but am inclined to keep on doing nothing until the insect challenges me to another fight. These beetles are intelligent enough to adapt themselves to their need for survival after centuries of habit."

Undaunted, he is happy that some 1500 trees have stood the unusual test.

Piggyback to Market LATEST dimension in food transportation is the refrigerated piggyback trailer, able to hold temperature accurately as low as minus 20, and with no maintenance necessary up to eight days. One appraisal of the cost is a little higher than rail and a little lower than trucks.

Address your "Windfalls" contributions to Henry Bailey Stevens, AMERICAN FRUIT GROWER, Willoughby, Ohio.

Whatever Your Low-Temperature Insulation Needs

From engineering design to complete erection, United Cork Companies offers complete service on B.B. (Blocked-Baked) Corkboard or Uni-Crest expanded polystyrene through its chain of branch offices from coast to coast.

Each installation is specifically planned to meet the requirements of the individual fruit storage area. And each installation is followed up by United's engineers to assure full satisfaction to the fruit grower.

You are invited to discuss your low-temperature insulation requirements with us.

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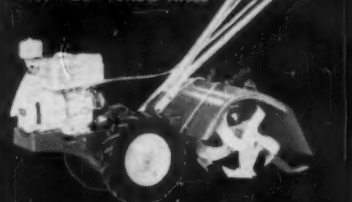
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POWER TO SPARE on any tilling job with

Ariens
ROCKET

- 5½ h.p. Lauson engine
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Ariens 5½ h.p. ROCKET... with fingertip controls... 2 forward speeds and reverse... exclusive tiller drive... all-steel TURBO TINES for 20" tillage... offers more quality, dependability, performance and value than any other tiller in its price range. See it... try it... and you'll agree!

Ariens Co., 139 Calumet St., Brillion, Wisconsin
Rush details about the ROCKET advertised in *American Fruit Grower*.

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CITY _____ ZONE _____
COUNTY _____ STATE _____

APPLES

Dry Scrubber for CA Storage

A NEW method for storing apples in controlled atmosphere storage scrubbed with dry lime has been tested successfully at the Nova Scotia Research Station in Kentville. According to Senior Horticulturist C. A. Eaves, the method is based on the controlled diffusion of the storage atmosphere over unopened bags of fresh hydrated lime placed in a separate gastight container.

Experiments at the station have shown that approximately 1 pound of lime is required for each bushel of apples stored for a period of six months. The scrubber was built to accommodate 6000 pounds of lime or 120 50-pound bags. The lime was placed in a galvanized iron box 20x7x3 feet equipped at one end with a removable panel fitted with a rubber gasket.

Further experimentation showed that half of this amount could be used initially, and a second charge of lime inserted after three months. When loading the scrubber, the layers of bags of lime were separated by 2x4-foot wooden strips to aid gas diffusion into the lime.

Two galvanized iron diffusion pipes 4 inches in diameter and 18 inches long, equipped with butterfly valves, were inserted into the scrubber 2 feet from each corner and connected to the interior of the storage. A 2-inch lip was provided at the ends of the pipe to allow for the application of a good seal of caulking compound to prevent leakage.

The butterfly valves were made tight by riveting a strip of sponge

rubber to the circular edge of the valve so that a quarter inch of rubber extended beyond the metal edge. A valve lock was added to prevent accidental opening of the valve. No fan was necessary since the carbon dioxide absorption was satisfactory by simple gas diffusion.

After the storage was loaded and sealed, the valves were kept closed until the carbon dioxide reached a level of 3%. The two valves were then fully opened and adjusted to provide the correct rate of diffusion. Apart from the single daily gas analysis and the occasional valve adjustment, the storage required no attention.

Capital costs in relation to caustic soda or water scrubbers are much reduced. For example, a quotation of \$500 was received for a caustic soda scrubber to be used with the 6000-box storage whereas the dry scrubber was built for \$150.

Break-Even Yield

IF you would like to know how your orchard rates as a "money maker," try this method for calculating break-even yield. The concept was developed by Prof. B. F. Stanton at Cornell University.

To figure your break-even yield, you must know your costs, yields, and prices. The idea is that the money a grower receives for each bushel of fruit is used in part for harvesting and growing the crop to the point of harvest. The remainder, if any, is profit.

For example, suppose a grower receives an average of \$1.50 per bushel for his crop. Assume that his harvesting cost averages 40 cents per bushel and his growing costs are \$250 per acre. Deduct 40 cents from \$1.50 which leaves \$1.10. Divide \$1.10 into

\$250 to obtain the number of bushels—227. This is the yield necessary to cover all his costs or to break even on costs.

If the grower's net yield is 300 bushels per acre, the difference between 300 and 227 (his break-even yield) is 73 bushels. Multiply this figure by \$1.50 per bushel to get his net profit which comes to \$109 per acre.

Usually the break-even yield can be calculated for any orchard if growing costs, harvesting costs, and average price received are known.

The Mutsu

A JAPANESE apple may become important in the eastern United States apple industry. Named Mutsu, it is a cross between the Golden Delicious and Indo, a Japanese variety. The Mutsu was patented in Japan in 1949 and has been under test at University of Connecticut.

It is yellow in color and, under Connecticut conditions, much larger than the Golden Delicious. Unlike the eastern-grown Golden Delicious, the Mutsu is highly resistant to russetting and will keep several months longer in storage. The flesh is not quite as fine grained or as highly flavored as the Golden Delicious but it is much more of a general purpose apple.

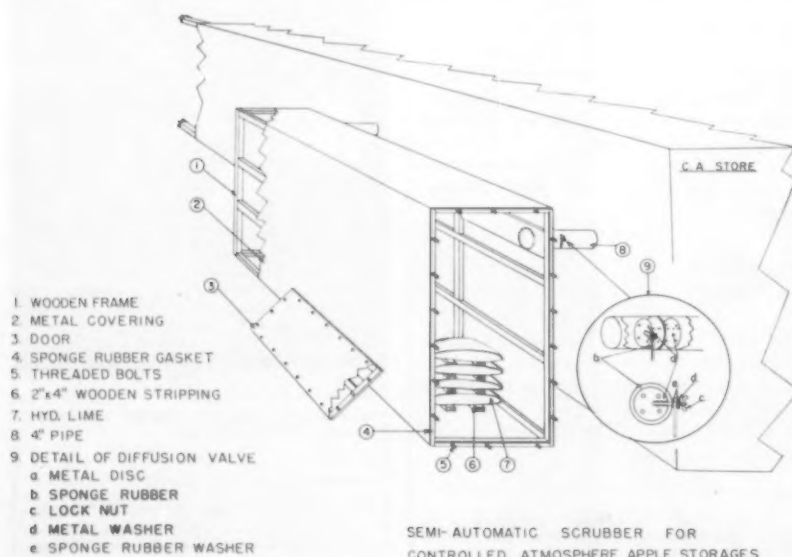
While seasonings are needed when using the Golden Delicious in pies, the Mutsu needs none and also makes an excellent apple sauce.

Processing Varieties Needed

A PPLE growers and processors were urged during Cornell's Agricultural Progress Days to take a long, hard look at processing apples. L. G. Klein, research specialist at New York State Agricultural Experiment Station, Geneva, pointed out that most important processing varieties "are not free of faults."

He cited Rhode Island Greening as "an uncertain cropper with a tendency to bear biennially;" Baldwin, which is not being replanted and will eventually be reduced to minor importance; Rome Beauty as "only a fair processing variety;" Northern Spy as "a top quality slice and sauce variety that has not been replanted heavily due to many horticultural weaknesses;" and Golden Delicious as more valuable on the fresh market and hence not likely to become a leading processing type, especially since its shape doesn't lend itself to machine peeling.

Some of the newer varieties are gaining commercial importance, Klein said. He named Monroe, Idared, Webster, Melrose, and Mutsu. Others still being tested show promise.



FRUIT-O-SCOPE

SPECIAL MARKET REPORT DECEMBER, 1961 AMERICAN FRUIT GROWER

What happened to the apple market this fall?

Reports are that McIntosh, Cortlands, and Jonathans flooded U. S. markets from New England, New York, and Michigan...with disastrous effects. Too many growers had too many apples to sell in too short a time. In the East and Midwest apples ripened late and in a rush. Some growers ran out of containers. Hot fall weather slowed down consumer purchases and reduced color and quality on first pickings. In some markets Cortlands and Jonathans sold for 6 cents a pound. This may be known as the apple marketing debacle of 1961.

Why not grapefruit juice instead of water?

Apparently an enterprising Florida firm is canning water for use in fallout shelters, and Florida Citrus Mutual's Bob Rutledge thinks grapefruit juice would make a better substitute. Besides being a satisfactory thirst quencher, canned grapefruit juice is full of vitamins and minerals. The water is reported to sell at 49 cents per 64 ounces while canned grapefruit juice averages out at 29 cents per 46-ounce can.

Washington cherry briners may yet agree to an amendment to the federal marketing agreement on cherries to include a regulation on the quality of cherries for brining. Northwest Cherry Briners Association passed a resolution at its recent meeting recommending that brining of cull cherries be discontinued. This may open the door to further discussion of the amendment which was not favorably received last spring.

The cranberry industry helped celebrate annual Cranberry Harvest Week (October 26-November 4) by presenting Acting Secretary of Agriculture Charles S. Murphy with a basket of cranberries. What made the berries distinctive is that they were picked less than 1 mile from President Kennedy's summer home in Hyannisport.

What's new in apple promotion? A Seattle, Wash., shoe store used "an apple for the teacher" theme this fall to promote back-to-school shoe buying. Not many teachers benefited from the idea, however, judging from the chomping of apples by the youngsters as they left the store!

New York & New England Apple Institute Manager L. W. "Monte" Marvin has come up with a plan to promote the return of the fruit bowl to the family table. If the idea jells, five different branches of the fresh fruit industry--apples, citrus, pears, grapes, and bananas--will co-operate in a program featuring each of the fruits in its proper season.

Virginia State Apple Commission is allocating funds to Virginia Polytechnic Institute for its research program to develop improved apple products. So far, \$4 million has been allotted by the commission. Target is a brand-new product to boost apple sales.

ORCHARD PROVED Hydraulic Pruner

- OPERATED BY AIR AND OIL
- FAST CLEAN POSITIVE CUTS
- NO BARK SCRAPING
- NO LADDER



- HEAVY CUTTING
- FAST NIPPING
- PUSHING ACTION
- AVAILABLE IN TWO MODELS

PATENTED

NEWAY PRODUCTS, Inc.

2400 E. 3000 South
Salt Lake City, Utah



ANTISEPTIC TREE WOUND PAINT

Highest Known Quality

Send for 8 oz. can \$1.00

MID-WEST TREE EXPERTS

8227 Wornall Rd.
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APPEACH Deluxe

Rigid frame, canvas covered bucket designed especially for peaches and easily bruised apples. Excellent for other fruits. Slip front stays protect against ladder. Top large enough for picker to lay fruit in carefully. Bottom is quick release type.

TYSON ORCHARD SERVICE
Flora Dale, Biglerville, Pa.

THE WISH BASKET PUTS YOU WHEREVER YOU WISH TO BE



The WISH BASKET is a 3 dimensional pruning tower mounted on a trailer. You can prune 1/4 of a tree from one setting. Operator simply moves the Single control knob, at his side, in the direction he wishes to go, either up or down, left or right, in or out or any combination of the 3 dimensions at the same time. The WISH BASKET is now supplied with its own complete hydraulic system, with pump to slip on any tractor p.t.o. The WISH BASKET and the powerful FRIDAY HYDRAULIC PRUNER make an economical combination.

Write for descriptive literature.

THE FRIDAY TRACTOR CO.
Hartford, Michigan

STATE NEWS

The Business Side of Fruit Growing

PENNSYLVANIA

Conducted Tour

STARTING from scratch with a run-down fruit farm of 130 acres presents a dismal prospect. But Joe Wentzler and his wife Lois did just that when they began in the fruit growing business in Muncy. Now, six



Joe Wentzler with four-year-old Royal Red Delicious apple tree. This variety is a development of C & O Nursery, Wenatchee, Wash.

years later, they have a going commercial operation.

Joe has done most of the work himself. He has approximately 90 acres in standard and dwarf apples, plums, sweet and sour cherries, pears, peaches, and strawberries. The oldest trees were planted in 1955.

It's a tribute to the Wentzlers' accomplishments that Lycoming County Fruit Growers Association held its twilight meeting at their fruit farm this year. About 25 people attended including Pennsylvania State University fruit specialists John Ruef, Stan Gaselle, and Herb Cole, and Paul Rothrock, Lycoming county agent. Guests were conducted on a tour of the orchards and joined in a discussion period afterwards.

MASSACHUSETTS

Fourth Largest

THIS year's cranberry harvest will be the fourth largest in history. It is estimated at 1,198,000 barrels, just short of last year's harvest by 142,000 barrels.

Nearly 800 growers and officers of the five state co-operative, Ocean

Spray Cranberries, Inc., learned of the forthcoming large crop and new developments in their industry during the co-op's 31st annual meeting held recently in Hanson.

The federal government is planning extensive support purchases of the berries under the crop support laws, Senator Benjamin A. Smith told the group.

A cooling room at Onset is being erected by the co-op. Ocean Spray president George C. P. Olsson stated, which will make it possible to hold cranberries for the fresh market until April.

According to Olsson, a study is underway to determine the most efficient and economical way to handle the crop without moving either the raw or finished product any greater distance than is absolutely necessary.

The full slate of officers was re-elected: George C. P. Olsson, president; Ambrose E. Stevens, vice-president and general manager; Bert Leasure, vice-president; Chester W. Robbins, treasurer; and Russell Makepeace, secretary.

NEW YORK

Future Consumers

APPLÉ growers Rolland Reitz and Bob Erwin, of Rochester, who operate about 100 acres of orchards and a roadside market, are never too busy to conduct educational

orchard tours for school children. During the hectic harvest season, they entertain kindergarten to third grade school classes at their orchards. This project started last year and has continued by popular demand.

The "course" consists of a wagon tour, a properly oriented "lecture" on growing and harvesting of apples, and a trip to the roadside market. The children are each permitted to pick an apple after the proper picking technique has been demonstrated.

The project has more than paid off in creating future consumers as well as in increased apples sales for the Reitz and Erwin fruit farm and good will for the industry.

WASHINGTON

On the Warpath

WASHINGTON State Peach Council is up in arms over the use of peaches as "loss leader" merchandise in Seattle markets. "Loss leader" selling is offering items for sale below the acquisition and handling costs.

Offering low-priced peaches as "bait" to attract customers to the stores results in competing stores lowering their prices and eventual reduction or cancellation of further orders for the fruit until the situation becomes stabilized. What this can do to grower prices is pretty obvious.

Directors of Washington State



HAND-CHURNED! AND WITH PEACHES, TOO!

These are a few of the 150 children who took their turns making peach ice cream at the old-fashioned ice cream feast, held by North Carolina's Governor Sanford. Bushels of peaches from the Sandhills were furnished by North Carolina Mutual Peach Growers Society, of which T. Clyde Auman is president.

Peach Council in a recent meeting agreed to work toward accumulating a peach fund to meet the legal expenses necessary to invoke the state "loss leader" law against thoughtless retail groups who may "loss leader" peaches in the future.

One of the oldest growing and shipping concerns in the Yakima Valley, Richey & Gilbert Co., has been sold to Marley Orchards of Cowiche. Elon Gilbert, who was president of Richey & Gilbert, said that Marley Orchards made the purchase because they wanted Golden Delicious and Red Delicious apples for their auction sales program. They acquired the warehouse, pack operations, and approximately 600 acres of orchards.

The Yakima plant has been transferred to Cowiche but cold storage operations are continuing at Yakima. The orchard management is under Francis Marley.

Richey & Gilbert Co. was established in 1904 by Elon Gilbert's father, the late H. M. Gilbert, and his grandfather, James Richey.

VIRGINIA

A Record Setter

ONE of the top wholesale commission merchants in the United States has rung up a new record. Edward L. Frost, of Richmond, has conducted a successful wholesale commission business on the same site for 62 years and is still going strong. His firm, Edward L. Frost & Co., has a four X rating with Produce Reporter Co. and a four star rating with Packer Red Book.

ARKANSAS

Bylaws Changed

FLINTROCK Strawberry Growers Association, which has been operating since 1938, recently adopted a new set of bylaws. Primary purpose was to make possible the zoning of the strawberry area to give representation on a population basis for seven directors.

This resulted in six districts in Searcy County and one comprising Stone and Baxter counties. Directors will be elected in each district for the 1962 season.

The strawberry association now has about 275 members who have approximately 1200 acres of berries. Only growers who produce strawberries on flintrock soil are eligible for membership. However, the co-op does permit growers who produce berries on sandy soils to market their crop under a different label.

Christmas, Bah, Humbug!!

... Say some folks, but not AMERICAN FRUIT GROWER. Each year at this time, we offer our reader-friends a chance to order two or more of the books on our list at a 10% DISCOUNT.

Be sure to order soon—This Christmas offer expires on December 31.

• **Growing Fruit and Vegetable Crops**, by T. J. Talbert. Easy-to-follow fundamentals which influence and determine successful fruit and vegetable production are set forth in this book. 350 pages...\$4.50

• **Profitable Roadside Marketing**, by R. B. Donaldson and W. F. Johnstone. A practical handbook for the successful operation of a roadside market. 142 pages...\$2.00

• **Fruit Pest Handbook**, by AMERICAN FRUIT GROWER editorial experts. This pocket-size illustrated manual gives latest control measures for all major diseases and insect pests. 100 pages \$2.00

• **Propagation of Plants**, by M. G. Kains and L. M. McQuesten. Gives the working methods of plant propagation. 560 pages...\$6.95

• **American Wines and Wine-Making**, by Philip M. Wagner. A practical illustrated book for the small grape grower and home wine-maker. 230 pages \$5.00

• **Apples and Apple Products**, by R. M. Smock and A. M. Neubert. A valuable reference book on the finished apple—with information on the many apple prod-

ucts that can furnish a profitable sideline for the grower. The composition, nutritional qualities, factors affecting quality, storage methods, and preservation of apples are discussed. Illustrated with many photographs, charts, and graphs. 486 pages...\$9.75

• **Modern Fruit Science**, by N. F. Childers. This is the brand new, revised edition of Dr. Childers' famous book, "Fruit Science". The new book is offered this month for the first time. It includes new methods and ideas on all phases of fruit growing. Sections are included on all types of fruit from apples to berries. 893 pages...\$7.50

• **Song of an Orchardist**. By Albert L. Mason. The best-loved poems of this fruit grower-philosopher who writes about life on a fruit farm. Many of these poems appeared first in AMERICAN FRUIT GROWER. Special first edition makes an ideal gift. 32 pages...\$1.00

• **The How-To Book on Strawberries**. by Robin Wyld. Written for the layman and illustrated with cartoons showing how to plant, tend, and harvest strawberries. 112 pages...\$1.50

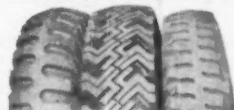
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PACKAGING & MARKETING

Gift Fruit — See cover

PRACTICALLY every grower has a special fruit that would make a fine gift. By grading and packaging in attractive containers, especially for the Christmas season, a go-getter can double his usual sale price.

The D. T. Browns in Watauga County, North Carolina, began packaging choice apples from their Rich Mountain Orchard specifically as Christmas gifts two years ago. The first year they sold over 700 half-bushel boxes.

Except for one or two calls to companies in the area, their advertising was limited to word of mouth. A nearby lime company bought 200 gift boxes of the Browns' apples as Christmas presents for employees.

The Browns' sons operate a paving construction company. They, too, sent apples to customers as gifts. And the Browns themselves used their apples as gifts to friends and customers. Neighbors bought many boxes.

Mr. and Mrs. Brown ship the apples in December. Each half bushel sells for \$3. Out of this comes the cost of box, 30 cents, and postage, usually 50 cents to \$1, depending on distance. Fancier boxes could be used, but the Browns believe emphasis should be put on quality of apples and not on boxes. The apples are packed with the best of care.

The Browns feel there's an unlimited market in providing gifts for others—especially during Yuletide. They have expanded their operation and plan to enlarge their plant. They believe the market is opening for many types of farm products, but suggest the beginner start on a small scale and expand as he gains experience.—John Corey.

Marketing Via Vending Machine

YOU can make more money on your apples by selling them through fruit vending machines. In fact, profit can be made on the machine as well, since it can return its costs in net profits every two years.

These and other facts have been found to be true by Ronald B. Tukey and Jerome Hull, Jr., Purdue University horticulturists. For example, a refrigerated vending machine with an illuminated display window and an attachment for making change sells for \$1300. According to statistics of the manufacturer, such a machine will gross from \$50 to \$100 a week depending on its location.

On a gross of \$50 a week, the breakdown on the costs is as follows:

Lease for location site	
and electricity	\$ 4.00
Insurance & repairs	2.00
Fruit at \$4 a bushel, figuring	
100 apples to bushel	20.00
Labor for filling machine	10.00
Total costs	\$36.00

Thus, total costs are \$36 which leaves \$14 a week net profit, or \$728 a year. Besides the profit from the machine, you can realize an extra profit of \$2.39 a bushel on your apples by saving on packaging, packing, brokerage, or hauling, which you would normally have to pay when selling at the market.

But the picture isn't all rosy. There may be difficulty obtaining permission to place a machine in a desired school or building, in servicing the machine during the busy harvest period, and in supplying varieties that will please the consumer.

Most popular varieties are Red and Golden Delicious, followed by Jonathan and Winesap.

However, only the "cream" of the crop can go into the machine since apples cannot be vended that are under size, have defects, or poor color. This means that the sale of the remaining fruit may be seriously affected.

There's another problem. Say that you produce 20,000 bushels of apples a year and plan to vend 2000 bushels by machine. You would need to operate 15 machines to move this fruit in six months at the rate of 5 bushels a machine per week.

This would involve a capital investment of nearly \$20,000, a big outlay to sell a relatively small portion of the crop. And then you would be faced with the problem of purchasing fruit to vend in these machines throughout the remainder of the year.

Nevertheless, you can derive a handsome return from apple vending. If you're a small grower, apple vending may be the means of increasing net income quickly. It can also be the means of diversifying your operation. And being a smaller grower, you may be in a good position to modify your production to more nearly meet the demands of the apple vending business.

But whether you actually operate the machines yourself or sell fruit to vending machine companies, you'll also be doing a service for the fruit industry. For what better promotion is there than making cold, crisp apples readily available to the public?

NEW FOR YOU

A Keen Machine

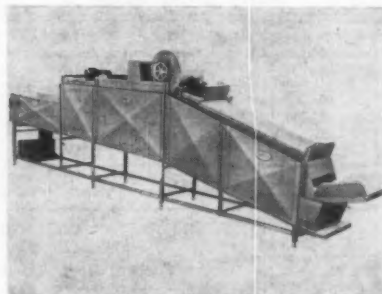
We all know that rotary tilling is the best possible answer to soil preparation prior to all types of planting. The manufacturer of the new Cult-master rotary tiller claims that it "out tills" tillers many times its size and capacity, turning soil quickly and easily to 6-inch depths. The machine



is mounted in the rear where a rotary tiller operates most effectively, and this assures that the freshly turned earth is not tramped down. W. L. Hancock of the Baird Machine Co., 1700 Stratford Ave., Stratford, Conn., can answer all your questions about this new unit.

Packing House Aid

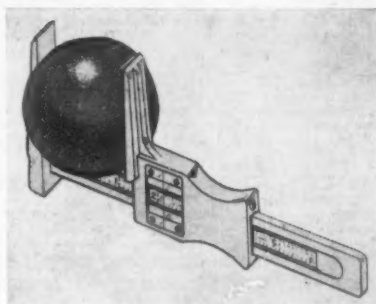
A new machine has been introduced to the market which combines in one operation the washing, drying, waxing, and grading of many types of fruits such as peaches, apples, plums, etc. The machine is called the "Gentle-Flow" and it can be purchased in any combination of units depending on the growers' needs. The beauty of the unit is that the fruit need not be



transferred from one machine to another thus eliminating much bruising. It ranges in size from 18 to 36 inches to meet any requirement. For more information, write Bruce Hertel at the Lobbe Pump and Machinery Co., in Gasport, N. Y.

Measuring Device

The Cripe caliper provides a fast, accurate way to measure fruits and nuts which are bought and sold on a size-graded basis. The caliper reads fast and accurately from 0 to 6 inches in gradations of tenths and hundredths. This chrome-plated instru-



ment weighs only 12 ounces. More information can be obtained by writing Macdonald & Company, 1324 Ethel Ave., Glendale 7, Calif.

High-Concentrate Sprayer

A new orchard and grove air-blast mist sprayer called Econ-O-Mist now makes it safe, practical, and effective to spray a 33X high-concentrate solution. With this sprayer, the same amount of chemical is applied per acre to trees and foliage with a reduction in the amount of water used. Drip or run-off is therefore elim-



inated, and the concentrate adheres to the tree instead of saturating the ground. Thus up to 25% in chemical savings can be achieved. The Econ-O-Mist mounts easily on a standard three-point tractor hitch. Since the power comes directly from the tractor, spray volume is automatically coordinated with ground speed, preventing over-saturation when turning or slowing down. The compact sprayer, which is only 4 feet long, is both easy to use and economical. For more information, contact John Lip-tak, Marlow Pumps, P.O. Box 200, Midland Park, N. J.

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THE GOOD LIFE

(Continued from page 10)

Because of the dry climate, Archie irrigates about every three weeks. He tries not to over-irrigate and constantly checks the lower levels of the orchard that lose moisture more slowly to make sure they do not receive too much water.

Archie isn't afraid to experiment with new varieties and new methods. He recently planted one acre of young trees—mostly Starking Delicious, a new variety in the Grand Valley which should ripen from 30 to 40 days before Elberta. The rest of the orchard is divided, with 7 acres of Elberta and 3 acres of Sungold.

In 1959, for the first time, Archie sent his peaches to Co-operative Producers, Inc., instead of packing them himself. He found the new system very satisfactory and economical since his acreage is not large enough to keep a shed crew busy all the time. The co-op packs about 8500 boxes (3400 bushels) for him annually.

Archie also has been sending about 1000 boxes (800 bushels) to the Mesa County Canning Corporation in Grand Junction. Another 800 bushels are sold to truckers and about 700 bushels of Sungold are sold at the orchard for local use.

Peaches are the only crop grown on our ranch and Archie has no outside job other than pruning out about 10 acres each winter. Archie and I both believe peach growing is a full-time job. A grower can't be working full time off the ranch and still do justice to his orchard.

We think Archie is a successful grower. He has supported his family and made annual payments of \$1000 plus taxes and interest on his property. And all available money has been put back into improvements in the orchard.

I like being a fruit grower's wife. Of course, this type of farming is about all I know because my father, T. E. Ely, is also a peach grower.

There are advantages and disadvantages to this type of farming. We are not so tied down. We can go some place for a few days once in awhile to fish, or go deer hunting in the fall, and all the family can go.

But there is always the possibility of losing the crop. If a hailstorm destroys the crop, or insects eat it up, or a freeze kills the peaches in the bud stage, the grower cannot plow the field and start over. That's it—you have to take care of the trees anyway.

Even though land is high priced and taxes are high, Archie has made a living off 11 acres and we both think peaches or other fruits are the only crops to grow.

THE END.

The International Flavor

THAT horticulture is becoming international in its scope on this rapidly shrinking planet is not a new idea, but it is picking up speed. The European Common Market points the way. Mexico, South America, and Australia have already made market impacts. Similarly, foreign markets for American fruits are gradually opening.

The international flavor is seen in scientific and educational horticulture, as well. For example, American Society for Horticultural Science and American Horticultural Society, representing American horticulture, have voted to extend an invitation for an International Horticultural Congress in the United States in 1966.

Finally, American Society for Horticultural Science, at its recent meeting at Purdue University, has called upon the organization to be more active in the international field. It is suggested, for example, that government agencies and foundations which are interested in international agriculture, should recognize the often sharp distinction between the terms "agronomist" and "horticulturist."

The terms have different meanings in the tropics than in the United States. For example, a tropical country sometimes asks for an agronomist and receives a cereal breeder or a soil specialist when the problem really deals with propagation and with such crops as cacao, rubber, and coffee. There is more relation between blueberries and coffee than between oats and coffee.

This is an important point and one too often overlooked. There has been much disappointment from sending men trained in the wrong area. Many tropical crops are much more horticultural than people in the North Temperate Zone realize.

Again, there is need for research men in tropical agriculture—men to study the problems at the place where they exist. Some of the new philosophy is to carry on research to find what is needed and to provide a few solutions to problems rather than to launch programs which try to apply American methods wholesale. Too much foreign aid money has gone

"down the drain" because of unfamiliarity with the needs of the areas.

At all events, horticulture is becoming really international, and it is beginning to assert a lead. The younger men in the industry will be well advised to keep an eye on the international horizon. Some real opportunities are there.

The Public Image

NATIONAL Apple Institute is the latest to retain a public relations firm "to create within the American public an appreciation of good health, good eating, and good value which are incorporated in the American apple."

This is excellent progress along the line we have been editorializing upon for several years. And we hope that the program will include the creation of the proper image of the fruit grower as a human being—who he is, how he operates, some of his problems, and his contribution to society.

Promoting the product is important, but we have too long neglected the techniques of big business in creating a good name and a good reputation and a proper public image.

Fruit Growing is Such Fun!



"Nobody's here but us apples!"

Fruit Talk

A new law in Illinois specifies that every nursery product offered for sale at retail in the state must now be clearly labeled as to the state of its origin.

Strawberry acreage in California has decreased from 20,700 to 11,700 in the last four years, while Mexican acreage has increased from 1900 acres in 1952 to 15,600 in 1961.

The blueberry bush is an interesting plant, says Dr. J. S. Bailey of Massachusetts, including the fact that the feeding roots have no root hairs (pull up a root and see for yourself); instead, a beneficial fungus (mycorrhiza) grows on the roots, absorbs soil nutrients, and passes them on to the blueberry plant.

A successful 43-bushel, collapsible steel bulk container is reported from Australia.

CA storages have increased 389,000 bushels in New England in 1961, for a total of 1,454,000; with the largest increases in Maine, followed by Massachusetts, New Hampshire, and Vermont.

World trade in bananas has increased to 178 million stems in 1960, with 85% from Latin America, and the rest largely from Africa; which has been accompanied by lower prices and a move by exporting countries to consult on a program of orderly marketing.

Have you ever noticed the somewhat sheepish look on the face of your fruit grower friend (now the president of the local society) as he poses with the crown held over the queen's head or as he tries to pin an orchid on her strapless evening gown?

The United States (which means California in this case) produces almost exactly half of the world's supply of unshelled walnuts—72,000 tons of a 149,000-ton total—Italy with 28,000, France 21,000, India 10,000, and Turkey 9000.

A most unusual but thoroughly sensible occurrence illustrating the regional approach to problems was the presentation of peach-thinning research at a recent scientific meeting by Emerson of Purdue University, giving results of his tests over a wide climatic range including Kentucky to the South and Michigan to the North—after proper courtesy contacts, of course, with colleagues in these "foreign states." And why not? The peach itself never heard of state lines.

What will participation in the Common European Market (United States of Europe) mean, asks the British fruit grower, as he tries to balance the possibilities of exports (Cox's Orange Pippin) vs a flood of produce from the Continent.

—H.B.T.

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